

WHAT IS CLAIMED AS NEW AND IS INTENDED TO BE SECURED BY LETTERS
PATENT IS:

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1. A polyurea, comprising the reaction product of isophorone diisocyanate (IPDI),
hexamethylene diisocyanate (HDI), isocyanurates thereof and combinations of these
materials with amines, the polyurea having a NCO/NH₂ ratio of 0.9 to 1.1 to 1 and an average
molecular weight of at least 5000.

2. The polyurea as claimed in Claim 1, prepared from IPDI and isophorone diamine
(IPD).

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3. The polyurea as claimed in Claim 1, prepared from the isocyanurate of the IPDI
and IPD.

4. The polyurea as claimed in Claim 1, prepared by reacting a mixture of IPDI and
IPDI isocyanurate with IPD.

5. The polyurea as claimed in Claim 1, prepared by reacting HDI and IPD.

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6. The polyurea as claimed in Claim 1, prepared by reacting the isocyanurate of HDI
and IPD.

7. The polyurea as claimed in Claim 1, prepared by reacting a mixture of HDI and
HDI isocyanurates with IPD.

8. The polyurea as claimed in Claim 1, prepared by reacting a mixture of IPDI
isocyanurate and HDI isocyanurate with IPD.

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9. The polyurea as claimed in Claim 1, which is solid and is insoluble in solvents.

10. A process for preparing polyureas as claimed in Claim 1, comprising:
reacting IPDI, HDI, their isocyanurates and mixtures thereof with amines in a

solvent, to which isocyanate also diluted optionally with a solvent, is added with stirring;
heating the reaction medium for 2 to 3 hours in refluxing solvent and then cooling the
reaction medium; and
separating the resulting polymer and then drying the polymer for 3 to 6 hours at 130
5 to 170°C in a vacuum.

11. A method of preparing paint, comprising:
formulating the paint with the polyurea as claimed in Claim 1 as a component of the
paint.

12. A method of preparing lacquers and coatings, comprising:
10 formulating the lacquers and coatings with the polyurea as claimed in Claim 1 as a
component of the lacquers and coatings.